King County Environmental Purchasing 2003 Annual Report



Procurement and Contract Services Section Finance and Business Operations Division Department of Executive Services



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County Council	Carolyn Edmonds District Cynthia Sullivan District Cynthia Sullivan District Charry Phillips District Charry Constantine District Charry C		
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Executive Summary

Environmental Purchasing Program 2003 Annual Report

In the past year, King County purchased **5 million dollars** worth of environmentally preferable products, **saving \$580,000** compared to the cost of the products ordinarily purchased. Environmentally preferable products include those that contain recycled material, reduce waste, save energy, are less toxic, or are more durable.

The Environmental Purchasing Program has earned national recognition as one of the most effective such programs in the Country. The King County Environmental Purchasing Program provides County personnel with information and technical assistance to help them identify and evaluate economical and effective recycled and environmentally preferable products.

The King County Recycled Product Procurement Policy (CON-7-1-1), adopted in 1989, directed County agencies to purchase recycled materials "whenever practicable." In 1995, the goals of Executive Policy were extended to include other environmentally preferable materials and processes (CON-7-1-2). Implementation of this policy relies on the judgment of the people who actually use the products in their daily work. The goal established in ordinance (KCC 10.16) is the purchase of environmentally preferable materials "whenever practicable," essentially a goal of 100% of what is realistic. The program enables agencies to use their own professional judgment to evaluate and adopt new opportunities as they are identified.

In recognition of these efforts, King County earned the first Recycled Product Procurement Award of the National Recycling Coalition in 1991. The County received the first annual Environmental Purchasing Award of the National Association of Counties (NACo) in 1998, which recognized the County as a national leader in municipal procurement of recycled and environmentally preferable materials. In 2000, the County received the Recycling at Work Award from the US Conference of Mayors for the work of this program. In 2002, staff made a presentation about the methods that have made our program successful to the first national Environmental Purchasing Conference of the Center for a New American Dream, in Philadelphia. In the past year, the program won the "2002 Government Award" from Sustainable Seattle, for outstanding leadership in the field and the "2002 Local Government Partner of the Year Award" from the US Environmental Protection Agency's WasteWise Program.

The program assembles data on the purchases of County agencies and produces an annual report to the County Council and the community on the status of policy implementation and the accomplishments of agencies. In 2003, recycled paper represented over 98% of County paper purchases, totaling 3.2 million dollars. Recycled paper is used for all major government functions, including more than nine million bus schedules annually, tax statements, court forms, pet license notifications, business cards, reports, stationery, and internal printing.

King County purchases many other recycled and environmentally preferable products. These include remanufactured toner cartridges, re-refined antifreeze and motor-oil (used by all County vehicles, including the fleet of 1200 Metro buses, one of the largest in the nation), low-VOC asphalt cold patch compound, plastic lumber, compost, shredded wood-waste, tire-retreading services, and hybrid vehicles. Many of these products are more economical than those they replace, and the County saved \$580,000 by their purchase in 2003.

Agencies continue to evaluate opportunities to use environmentally preferable products, such as less toxic cleaning products, recycled content carpet, energy-efficient equipment, and low-toxicity pest-control methods and to incorporate sustainable building methods into construction.

Program success depends on enabling agencies to appreciate the new opportunities being created in a changing marketplace, and information is the central component of the program. In addition to producing educational seminars on specific opportunities, the program makes extensive use of the Internet. It uses email to distribute an "Environmental Purchasing Bulletin" to agency liaisons and maintains a website (www.metrokc.gov/procure/green) to make information available to agencies, suburban cities, and the community-at-large on the environmental purchasing experience of County agencies.



Environmental Purchasing Program Procurement and Contract Services Section Finance and Business Operations Division Department of Executive Services

www.metrokc.gov/procure/green

2003 Annual Report

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I. King County Environmental Purchasing Program

This report summarizes the achievements of King County agencies from July 1, 2002 through June 30, 2003, in their implementation of the King County Environmental Purchasing Policy.

In the past year, King County agencies continued to increase their use and awareness of environmentally preferable products. Municipalities in King County and across the nation continue to seek advice from the Environmental Purchasing program to learn from our experience. For these efforts and others, the Program earned the 2002 Government Award from Sustainable Seattle for outstanding leadership and the "2002 Local Government Partner of the Year Award" from the US Environmental Protection Agency's WasteWise Program.

King County is maintaining this position of leadership through the efforts and accomplishments of County employees who are actively pursuing ways to use economical, environmentally preferable materials in new applications. This includes interaction with vendors to promote the development of viable and economical environmental products.

The Policy

The County's Environmental Purchasing Policy reflects a long-term commitment to the purchase of "environmentally preferable"* (EP) materials. King County adopted its original Recycled Product Procurement Policy (KCC 10.16, Executive Policy CON 7-1-1 – AEP) in 1989. This policy directed County agencies to purchase recycled products "whenever practicable," essentially a goal of 100% of what is realistic.

In 1995, the County revised and streamlined this Executive Policy (CON 7-1-2 – AEP) to reflect the experience of five years of implementation by King County agencies. The revised policy requires County agencies to purchase recycled and other environmentally preferable products whenever practicable and expands the commitment of agencies to the purchase of materials with lower toxicity, and greater conservation of energy, water, and other resources.

King County Environmental Purchasing policy: www.metrokc.gov/procure/green/policy.htm

*King County defines "environmentally preferable" as having a lesser or reduced effect on human health and the environment when compared with competing products that serve the same purpose. This comparison may consider raw materials acquisition, production, manufacturing, packaging, distribution, reuse, operation, maintenance, or disposal of the product.

The Program

The Environmental Purchasing Program aims to fundamentally change the procurement practices of the 13,000 employees of King County and its contractors. With the full participation of the people in the agencies who make purchasing decisions, the County can attain its goal of buying recycled and other environmentally preferable products whenever practicable. The program provides County personnel with information and technical assistance to help them identify economical and effective recycled and environmentally preferable products and create contracts for their purchase. The program helps agencies understand policy requirements and communicates specifications, contracts, and other practical information between County agencies, vendors, users, and other jurisdictions.

The program's collaborative approach, which relies on the expertise of County employees to evaluate procurement opportunities and revise procedures, is gradually changing the way agencies view these opportunities. County agencies have responded by developing new ways to use recycled and other environmentally preferable products, especially where these will reduce costs, while still meeting performance standards.

Implementation

The Procurement and Contract Services Section of the King County Finance and Business Operations Division administers the Environmental Purchasing Program to help County agencies increase their purchase of environmentally preferable products. The program:

- researches recycled and environmentally preferable products, applications, and vendors and communicates this information to agencies to help them make environmentally beneficial purchasing decisions;
- encourages agencies to evaluate new products, assists in development of specifications and contracts, and disseminates evaluation results to County agencies and others;
- maintains an Internet website and produces an e-mail bulletin to provide users with information about the performance, cost, and availability of recycled and environmentally preferable materials, and about policy implementation strategies;
- reviews policy requirements with agencies and monitors the status of policy implementation;
- prepares the annual report of the King County Environmental Purchasing Program for the County Council, County agencies, suburban cities, other jurisdictions, and the community, to promote the exchange of information between personnel in County agencies and their counterparts in other organizations;
- coordinates development and implementation of policy models and procurement guidelines and recommends revisions to County policy;
- provides technical support to the outreach programs of the Department of Natural Resources and Parks to facilitate the implementation of policies favoring recycled and environmentally preferable procurement by suburban cities in King County;
- ensures that contracts issued by the County require recycled and environmentally preferable components whenever practicable and that contractors provide certification of this content and report amounts purchased; and
- assembles and disseminates evaluation results and reports of environmental purchases by agencies and their contractors.

The Challenges

A number of factors challenge efforts to increase environmental purchasing:

- project managers, designers, and contractors are not familiar with the use of many recycled and other environmentally preferable products and are uncertain of the ways in which they might be effectively specified and applied as substitutes for familiar products;
- developers of environmentally preferable products are often in the early stages of identifying the needs of potential customers and establishing the production, marketing, and distribution capacity to meet them;
- the use of a product must be economically responsible; the cost must be competitive, and contractors must have developed the processes and skills needed for its economical use;
- many products must meet rigorous standards maintained by various governmental and industry regulators and the modification of these standards can be a painstaking, slow, and expensive process. As these standards and specifications are often still under development, manufacturers, regulators, and users may not be equipped to deal with new materials effectively;
- developing and administering data-collection procedures to obtain information from construction and other service contracts is time-consuming and places unfamiliar demands on participants, which can be costly; and
- Agencies are still learning to balance competing claims of environmental preferability. The
 specifier must decide, case-by-case, how much weight to give recycled content and how much to
 give low toxicity, or how to balance recyclability against energy efficiency. We anticipate that trade
 associations and/or government regulators will develop standards and specifications to clarify these
 issues.

The Opportunities

The Program and County agencies are addressing these challenges by:

- maintaining liaisons between agencies and the Environmental Purchasing Program to facilitate policy implementation and data collection;
- assembling detailed application information and performance data from product users and manufacturers and disseminating this to potential users in the County;
- seeking new applications for recycled and other environmental products and encouraging supply and contract managers to specify them whenever possible;

- helping agencies develop specifications for environmental products whenever evaluations establish that product performance and cost are acceptable;
- evaluating environmental product performance in new applications through testing and pilot programs and sharing the results through our website, the email "Environmental Purchasing Bulletin," and by other means with agencies, jurisdictions, and other users;
- helping potential suppliers obtain feedback from users to assist them in product development and helping them understand King County procurement processes; and
- expanding our communication network so we can share information about our experiences with other organizations.

II. Purchases & Savings

Purchase Summary

In the past year, King County **purchased 5 million dollars** worth of environmentally preferable products, **saving \$580,000** by doing so. Environmentally preferable products include those that have recycled content, reduce waste, use less energy, are less toxic, or are more durable. The Environmental Purchasing Program has earned national recognition as one of the most effective such programs in the Country due, in part, to our emphasis on cost-effective products.

The three tables below summarize year 2003 environmentally preferable product purchases. This data is primarily obtained from "term" supply contracts, which require vendors to report purchases to the Environmental Purchasing Program. Term supply contracts are centrally administered and enable County agencies to purchase materials at low and consistent prices. The table also includes data from one-time purchases. Details of purchases and product performance follow in the "Purchase Detail" section, which is provided to program staff from agency contacts.

Office Products	Per	Units	\$
Can Liners, Recycled	Case	8,444	135,390
Electronics Recycling	n/a	n/a	17,123
Paper, Copy and Bond	Cases	18,155	589,796
Paper, Printing	n/a	n/a	2,119,436
Paper Products, Miscellaneous	n/a	n/a	536,866
Toner Cartridges, Remanufactured	Each	4,880	221,442
Sub-Total:	N/A	N/A	3,620,053

Building/Maintenance	Per	Units	\$
Aggregate, Recycled Concrete	Ton	3,856	30,848
Asphalt Cold Patch	Ton	34	15,582
Compost	Yard	3,561	89,025
Fluorescent Lamp Recycling	n/a	n/a	8,460
Glass Filtration Sand	Ton	16	3,520
Hydrostripping Services	n/a	n/a	776
Shredded Wood	Yard	34,190	28,748
Sub-Total:	N/A	N/A	176,959

Vehicular	Per	Units	\$
Air Filters, Dry-Cleaned	Each	n/a	1,750
Antifreeze, Remanufactured	Gallon	17,232	44,198
Lubricants, Vegetable-based	Gallon	2,000	24,540
Oil, Re-refined	Gallon	92,653	250,987
Parts Washer, Aqueous (Bioremediating)	Unit	8	11,280
Tire Retreading	n/a	n/a	126,638
Vehicles, Hybrid	Each	12	236,000
Vehicles, Flexible Fuel	Each	38	578,000
Sub-Total:	N/A	N/A	1,273,393

Commodity Purchase Totals	Per	Units	\$
Total Dollars:	N/A	N/A	5,070,405

Purchase Detail - Office Products

Can-Liners

In 2003, King County purchased nearly **8,500 cases** of can-liners at a cost of over **\$135,000**. These were made with 25%-30% high-density polyethylene (HDPE) or 25% low-density polyethylene (LDPE) recycled post-consumer plastic. County agencies have used recycled plastic bags with good results since 1991. For more information, visit the program website at: www.metrokc.gov/procure/green/plasbags.htm.

Electronics recycling

There is growing concern about the ultimate effects of landfill or incineration of computers and electronics, which contain a wide variety of heavy metals and other toxins. Of special concern are cathode ray tubes (CRTs), which are no longer accepted at the King County landfill, because they contain large amounts of lead (often 4 or 5 pounds each). In 2002, recognizing that an environmentally preferable alternative was needed, the **Waste Reduction and Recycling Section** of the King County **Solid Waste Division** established a trial contract to provide agencies with an opportunity to recycle obsolete computers and other electronic equipment in a way that does not further damage the environment. Based on the success of the one-year trial, a new contract was competitively bid and awarded to a local vendor in June, 2003.

In the past year, agencies recycled 1,250 monitors, 12,500 pounds of other electronic equipment and 330 pounds of batteries of various types. Agencies using this environmentally preferable recycling service, instead of disposal into the municipal waste stream, included Airport, Property Surplus, Assessments, Community Services, District Court, Roads Maintenance, Finance, E-911, Adult & Juvenile Detention, Roads-Environmental Labs, Cedar Hills Landfill, Department of Natural Resources and Parks, Metro Transit and Sheriff's Office.

Paper, Copy and Bond

County agencies purchase recycled non-chlorine bleached copy paper with 30% post-consumer content. The post-consumer level meets the Federal Environmental Protection Agency's (EPA) Comprehensive Procurement Guidelines (CPG) established by Federal Executive Order 13101. County purchases of recycled paper totaled over **18,000 cases** at a cost of **\$590,000** for the 2003 reporting year, which represents **99%** of total copy paper purchases.

Paper, Printing

Printing performed by the **County Printshop** and through contracts administered by **Procurement Services Section** use recycled paper whenever practicable. This includes all printing from business cards to tax and court forms, reports and even bus timetables. During 2003, recycled paper purchases (estimate of material only, exclusive of other printing costs) totaled **over 2 million dollars**.

Paper Products

Beyond recycled copy and printing papers, the County also has several contracts that allow agencies to purchase various recycled paper products. This includes office supplies, such as envelopes, boxes, folders and notepads; and janitorial products, such as paper towels and tissues. 97% of these met recycled-content standards in 2003, and totaled over \$530,000.

Toner Cartridges, Remanufactured

Remanufactured toner cartridges for laser printers are purchased under a contract developed in collaboration with local vendors and maintained by the Environmental Purchasing Program since 1991. Cartridges supplied under this contract must meet original equipment manufacturer's (OEM) standards and provide full performance guarantees. In 2003, the County purchased nearly **5,000 cartridges**, at a cost of **approximately \$220,000**. These purchases **saved \$330,000**, as the cost of these remanufactured cartridges is approximately one-third the cost of new cartridges. Spent cartridges are remanufactured and all components are recycled when their useful life is over, reducing the landfill disposal of hazardous material. The current contract includes ink-jet cartridges, fax and other toner cartridges, all at significant cost-savings. For more information, visit the program website at: www.metrokc.gov/procure/green/tonecart.htm.

Purchase Detail - Building/Maintenance

Aggregate, Recycled Concrete

Recycled concrete aggregate has been used in various King County projects over the past twelve years. Last year, the **Roads Operations Section** purchased **3,850 yards** of recycled concrete (and asphalt), at a cost of **\$31,000**, for use in small maintenance projects. Using recycled material in place of increasingly scarce and expensive native rock aggregate saves money, as well as diverting material from the waste-stream. For more information, visit the program website at: www.metrokc.gov/procure/green/concrete.htm.

Asphalt Cold Patch

In 2000, the **King County Roads Operations Section** initiated an evaluation of the performance of a new **cold-patch** compound that reduces the amount of Volatile Organic Compounds (VOCs) released to the environment. This product is a dry, odorless, ready-to-use asphalt-based compound used to repair potholes, cracks, and other defects in paved surfaces. It contains 70% post-consumer asphalt. In the past year, King County Roads and Airport purchased almost **1,500 - 50 lb. bags**, approximately **34 tons**, of this product at a cost of over **\$15,500**. According to the manufacturer, this amounts to 750 55-gallon drums of VOC's prevented from being introduced into the air and water in King County so far this year. In 2001, **Roads Division** included this cold-patch product on its roads maintenance materials contract. For more information, visit the program website at: www.metrokc.gov/procure/green/bul65.htm.

Compost

Compost-amended topsoil is specified for use in maintenance and construction projects. The **Roads Environmental Unit** reported that in the past year, their contractors used over **3,500 cubic yards** of compost topsoil, derived from both yard-waste and biosolids compost. Further information about the use of compost by County agencies is available on the program website at: www.metrokc.gov/procure/green/compost.htm.

Fluorescent lamp recycling

Alternatives to landfill disposal of fluorescent lamps are becoming more important, as federal, state, and local regulation of mercury disposal is increasing, because these often contain significant amounts of mercury and other toxic materials. In the year 2000, King County established a contract for recycling waste lamps, including fluorescent tubes and high intensity discharge (HID) lamps. In the past year, Airport, Roads, Solid Waste, Facilities Management and Transit Divisions, the Department of Natural Resources and Parks, the Department of **Transportation**, and the **Environmental lab**, as well as the property management company for the King Street Center, used this contract to recycle several types of lamps, including over 22,000 straight fluorescent tubes, 350 compact fluorescent lamps, and 1,750 HID lamps. Regulations requiring lamps recycled can to be www.ecv.wa.gov/pubs/0004020.pdf. For more information regarding King County's program to recycle lamps, visit the website at: www.metrokc.gov/procure/green/bul60.htm.

Glass Filtration Sand

The **Department** of Natural Resources and Parks began using recycled glass sand in place of conventional filter sand in the pool filters at the **King County Aquatics Center** in Federal Way in 1998. Parks has been pleased with its performance and has converted several more pools to this material. In the past year, they installed sixteen tons of recycled glass, at a cost roughly the same as that of virgin sand. Department personnel have also received numerous inquiries from other jurisdictions around the country about this product and application. For more information, visit the program website at: www.metrokc.gov/procure/green/pksglass.htm.

Hydrostripping

At the end of 2000, the King County **Traffic Maintenance Unit** set up a pilot program for hydrostripping damaged aluminum signs and established a contract for these services in 2001. Hydrostripping uses high-pressure water to remove paint and laminate from signs, and the water is re-used to minimize environmental impact. The Sign and Marking Supervisor reports that it costs half as much to refurbish the sign as it does to purchase new aluminum sign blanks.

In the 2002 reporting year, the County saved approximately \$7500 by using this contract, but unexpected costs have come to light that caused the usage of this contract to shrink significantly, so that the 2003 reporting period shows **savings** of only \$775. According to the **Traffic Section**, the reduction in utilization of this contract is due mainly to the labor intensive sorting required to reprocess the signs. Despite the unexpected labor issues, **Roads** continues to use this service, though not in the quantity originally estimated. For more information, visit the program website: www.metrokc.gov/procure/green/bul69.htm.

Plastic Lumber

The Renton Maintenance Facility of the Fleet Administration Division requires new dump trucks to be outfitted with recycled plastic sideboards before delivery. High-quality old growth fir had been customarily used in this application, but it is increasingly scarce and expensive. Since 1996, the Division has been retrofitting all of its trucks with recycled plastic because it is more impact-resistant and needs to be replaced less frequently, saving money in the long-term despite its somewhat higher initial cost. Because replacement frequency has been reduced from two wooden sideboards per week to less than one plastic sideboard per month, the Division is **saving \$10,000 per year** in materials costs alone. For more information, visit the program website at: www.metrokc.gov/procure/green/errlbr.htm.

Shredded Wood

Wood chips made from shredded land-clearing debris can be used as ground cover for erosion-control, horticultural mulch, and other applications. Several County agencies are taking advantage of the availability of this inexpensive and environmentally preferable alternative to virgin aggregate or commercial bark. In the last year, the **Solid Waste Division** used it to stabilize temporary driving surfaces at the **Cedar Hills landfill**, especially during rainy seasons. The Division purchased **35,000 cubic yards** of shredded wood at a cost of nearly **\$30,000 and saved an estimated \$35,000** by using this instead of virgin aggregate.

The **Roads Division** used shredded wood in a road-widening project. In this project, the Division shredded the stumps and other landclearing debris on-site to produce **1,200 cubic yards** of "wood mulch." This material lasts longer, costs less, and does a better job as an erosion control ground cover than bark, the typical material for this application. This project **saved about \$18,000** in new material costs. For more information, visit the program website: www.metrokc.gov/procure/green/swhog.htm.

Purchase Detail - Vehicular

Air Filters, Dry-Cleaned

In 2002, the Renton Equipment shops of the Department of Transportation initiated a new program to reduce replacement costs of heavy equipment air filters and reduce the number of used filters being sent to the landfill. The Division has contracted with a local company, to "dry-clean" (with a sonic cleaning process) the dirty air filters of heavy equipment. The Division saved approximately \$3500 in the past year and extended the life of many air filters that were previously sent to the landfill. For more information, see the Environmental Purchasing Bulletin on the program website at:

www.metrokc.gov/procure/green/bul73.htm.

Antifreeze

County agencies have purchased antifreeze, manufactured with re-refined ethylene glycol, under a contract maintained by Procurement Services Section since 1991. In 2003, Motor Pool, Solid Waste Operations, the Renton Maintenance Facility, and the Transit Non-Revenue Vehicle Shop purchased almost 1,500 gallons of re-refined antifreeze. This contract also requires that the material be re-refined in a manner that meets all regulatory requirements, thereby avoiding the discharge of a toxic material into local waterways and ensuring compliance with State and Federal regulations.

In 1999, the County's Metro Transit Division awarded a contract for re-refined concentrated ethylene glycol antifreeze for buses. They introduce the "additive packages" in the maintenance shops. In 2003, they purchased over 13,500 gallons of re-refined antifreeze, at a cost of over \$37,000, and saved over \$25,000 by its use. Total purchases, in 2003, including Transit and other County fleets were over 17,000 gallons, at a cost of almost \$45,000. 13,500 gallons of spent antifreeze was returned to the supplier for "closed-loop" re-refining into new antifreeze. For more information about King County's use of antifreeze, visit the program website at: www.metrokc.gov/procure/green/antifrz.htm.

Lubricants, Vegetable-based

Vegetable-oil-based lubricants are emerging as a high-performance, environmentally friendly alternative to the more commonly purchased petroleum oil lubricants. Users choose bio-based lubricants because they can perform as well or better than petroleum oils, are readily biodegradable and low in toxicity, and offer worker safety advantages.

Hydraulic oils are of specific concern because they are often lost to the environment in the normal course of equipment operation. In 2001, the Renton Maintenance Facility awarded a contract for vegetable-based hydraulic oils, two-cycle engine oils, and bar & chain oils for their equipment to comply with provisions of the Federal Endangered Species Act and other regulations intended to protect our sensitive waterways and groundwater. The agency also specifies that manufacturers fill new turf maintenance equipment with vegetable-based oils. In the past year, they purchased 8,000 quarts at a cost of approximately \$25,000. For more information, visit the program website: www.metrokc.gov/procure/green/bul59.htm.

Oil, Re-refined

Motor oil made with re-refined base-stock has been used in County vehicles operated by the **Renton Maintenance Facility**, **Motorpool** and **Solid Waste Operations** since 1992. In 1999, the **Transit Division** or "**Metro Transit**" began evaluating the use of re-refined oil in their buses. They tested 15W40 oil in their coaches at one downtown bus base and the trials showed re-refined oil to be equal in price and performance to virgin oil. In the Fall of 1999, Metro Transit became one of the first major metropolitan transit authorities in the nation to adopt the use of re-refined motor oil for its entire fleet of over 1200 buses. In 2003, the County purchased over **90,000 gallons** of re-refined oil at a cost of over **\$250,000**. For more information on oil, visit the program website at: www.metrokc.gov/procure/green/oil.htm.

Parts Washers, Bioremediating Aqueous

The King County Fleet Administration and Solid Waste Divisions have concluded evaluations of environmentally preferable systems for washing parts during vehicle and equipment maintenance. They have purchased eight aqueous part washers that do not use hazardous solvents. Metro Transit has also purchased one unit for evaluation. These units use water instead of petrochemical solvents, and use non-hazardous bioremediation (using microbes) to clean greasy parts. The by-products of this system are water and carbon dioxide.

According to King County Fleet's Equipment Supervisor, the product is effective and meets their criteria for health, safety, environmental impact, and performance. For more information visit the program website at: www.metrokc.gov/procure/green/bul77.htm.

Tire Retreading

Tire retreading services worth over \$125,000 were used to retread tires for trucks and other heavy equipment at the Renton Maintenance Facility, Fleet Division and the Cedar Hills Landfill of the Solid Waste Division. Retreading a tire costs about half as much as buying a new tire. This not only avoided landfill disposal of tires, but also saved the County approximately \$125,000 in new-tire expense in 2003.

Vehicles, Hybrid

King County is purchasing hybrid electric vehicles (HEVs) that increase fuel-efficiency and reduce greenhouse gas emissions. The County's **Department of Transportation** purchased 12 hybrid Toyota Prius Cars for over \$235,000 in 2003. These hybrid-electric vehicles combine the internal combustion engine of a conventional vehicle with the battery and electric motor of an electric vehicle, and attain twice the fuel economy. This combination offers the extended range and rapid refueling of a conventional vehicle, with a significant portion of the energy and environmental benefits of an electric vehicle. This purchase adds to the approximate 40 hybrid cars already in the fleet. For more information, see the Environmental Purchasing Bulletin on the program website at: www.metrokc.gov/procure/green/bul66.htm.

Vehicles, Flexible Fuel

King County **Fleet Administration Division** purchased 38 flexible-fuel vehicles (FFV), including 6 Ford Explorers, 1 Ford Taurus and 31 Dodge Stratus, for a total of **\$578,000**. These vehicles are equipped to use ethanol, gasoline, or "E85" ethanol/gasoline mix, although regional supply infrastructure may limit the availability of ethanol and E85.

Savings Summary

In 2003, the County **saved \$580,000** by purchasing recycled and other environmentally preferable materials. The Environmental Purchasing Program has helped agencies identify opportunities to purchase environmentally preferable products that not only perform well, but also save money. In some cases, the product simply costs less and in other cases there are savings in installation and maintenance costs. For example: the cost of a remanufactured toner cartridge is about one-third the cost of a new cartridge, shredded wood costs less than virgin aggregate, plastic lumber avoids the consumption of virgin timber and reduces maintenance cost, and it costs half as much to retread a worn tire as to buy a new one.

The table below estimates the cost savings based on purchase price only, and does not reflect savings in maintenance and installation. Additional examples of savings can be found in Section IV, "Environmental Initiatives of County Agencies," of this report (see page 19).

Commodity	2003 Dollar Savings
Toner Cartridges	330,000
Tire Retreading	125,000
Shredded Wood	53,000
Aggregate	30,000
Antifreeze	25,000
Plastic Lumber	10,000
Air Filter Cleaning	3,500
Compost	3,500
Hydrostripping Services	775
Total Dollars:	\$580,775

III. Supporting Program Elements

The Environmental Purchasing Program helps agencies develop practical ways to use recycled and other environmentally preferable products and processes, through several program elements, detailed in this section.

Agency Liaison Network

The program uses a network of liaisons within agencies to provide users with information on environmentally preferable products and processes. These liaisons allow us to reach the people who do the daily work, and who can help us understand the roles and functions within each unit. This helps us to communicate new evaluation opportunities, institutionalize the routine use of these materials, and share evaluation results and specifications among agencies.

Internet Information Project

The communication capacity of the Internet has brought great changes to the way this program delivers information to its clients. This annual report, for example, is distributed principally through email, with only a few paper copies produced. The program delivers most of its information to clients through email or the Internet.

Website www.metrokc.gov/procure/green

The King County Environmental Purchasing Program has maintained a website **since 1995** as a resource to participants in the King County program as well as others in the community. There were over **175,000** visitors to the Program website in the past year. Clients visiting this website find information on King County's experience with recycled and environmentally preferable products, specifications, evaluations, contracts, and contact information.

Municipalities and other organizations throughout the nation are beginning to recognize the difference they can make to the environment by purchasing environmentally preferable products. Thanks to the leadership of King County agencies, purchasers are able to use the Internet to find information that will help them understand their opportunities in this confusing new area.

People from all over the world are taking advantage of this site and these contacts are bringing new information that County agencies, suburban cities, and others can use as we all try to develop new applications for recycled and other environmentally preferable products.

In the past year, comments and questions have been left at the program website by visitors from:

The Nations of:

Ecuador El Salvador Mexico Nigeria United Kingdom

The States of:

Iowa New Hampshire Montreal, Canada

Counties:

Alameda Co, CA Hennepin Co, MN Lee County, FL

Multnomah Co, OR Sarasota Co, FL

The Cities of:

Austin, TX Aurora, CO Bainbridge Island, WA Bellevue, WA Beijing, China Bellingham, WA Bishopstown, Ireland Bloomfield Hills, MI Boston, MA Brooklyn, NY Brussels, Belgium Cambridge, Canada Camp Verde, AZ Chatsworth, CA Carson City, NV Chula Vista, CA Concrete, WA Chicago, IL Dallas, TX Edison, NJ Edmonds, WA Elgin, IL Fort Lauderdale, FL Fredericktown, MO Kansas City, MO Hawthorne, CA Hendersonville, NC Indianapolis, IN Houston, TX Indiana , PN Lunenburg, Canada Maumee, OH Longueuil, Canada Mississauga, Canada Milwaukee, WI Minneapolis, MN Monroe, NC Mountainair, NM Mountlake Terrace, WA

Monroe, NC Mountainair, NM Mountlake Terrace, WA
New York, NY North Bend, WA Olathe, KS
Olympia, WA Overland Park, KS Palo Alto, CA
Petaluma, CA Rainsville, AL Salmon Arm, BC, Canada

San Diego, CA
Selkirk, NY
Selkirk, NY
Shanghai, China
Springdale, AR
Tacoma, WA
Taipei, Taiwan
Taylor, TX
Toms River, NJ
Walla Walla, WA
Washington, DC
Winnipeg, Canada
Wood River, IL
Yokohama, Japan

Universities/Schools of:

Pace Law School, New York
University of Kentucky
University of New Hampshire
University of New Hampshire

University of Nottingham, England
University of Washington
University of Wisconsin

University of Port Harcourt, Nigeria
University of Waterloo Ontario, Canada
Wentworth Institute of Tech, Boston

E-mail Environmental Purchasing Bulletin

The Program began producing an "Environmental Purchasing Bulletin" in 1997 to disseminate information about recycled and environmentally preferable products, events, contracts, and other resources. Recipients include participants in the program's County liaison network, suburban cities, and others across the nation. There are currently **600** direct recipients of this bulletin. Many of these recipients originate their own list-servs and newsletters and forward the bulletin to others by those means. An index and the full contents of past bulletins can be found on the program website at: www.metrokc.gov/procure/green/bulindex.htm.

Bulletins for 2002/2003:

Dry Cleaned Air Filters
Recycled Carpet Contract
2002 Environmental Purchasing Annual Report
Ultra-Low Sulfur Diesel Fuel
Aqueous Part Washers
Sustainable Washington
Hybrid Diesel-Electric Buses
Efficient Marine Engines
Sustainable Seattle Award
Electronics Recycling Contract

Internet Discussion Groups

We participate in several Internet discussion groups, where we exchange environmental purchasing information with other jurisdictions, many of which now subscribe to our Environmental Purchasing Bulletin. The participants come from across the nation and bring a wide range of experience, which has been shared with County agencies for evaluation.

- **EPPNET** Environmentally Preferable Purchasing Network, sponsored by the Northeast Recycling Council (NERC). A discussion group on environmental purchasing issues.
- **Greenyes** a discussion group on general sustainable issues.
- IAQ@Onelist.com a discussion group on indoor air quality issues.
- Manitoba Green Procurement Network a Canadian discussion group on Canadian and U.S. green procurement issues.
- Waste Prevention Forum a discussion group managed by King County Solid Waste Division, and part of the National Waste Prevention Coalition.

Public Involvement

The King County Environmental Purchasing Program offers its experience in support of the planning, policy-development, and procurement-education activities of local jurisdictions and other organizations.

The program provides technical assistance to, and exchanges information with, suburban cities in King County, as well as state and federal agencies, and other users. In 2002-2003, program personnel participated in the following programs, conferences and workshops:

• Hybrid Electric Vehicle Conference Call, Center for a New American Dream Presentation by King County Fleet Manager (February, 2003)

At the request of the Environmental Purchasing Program, the Director of the King County Fleet Administration, and the Equipment Supervisor addressed a national teleconference, hosted by the Center for a New American Dream (CNAD, Washington DC). This conference brought together fleet managers and other purchasers from around the country to discuss the challenges and opportunities in the emerging field of hybrid electric vehicles (HEVs). Participants included more than 280 large institutional purchasers.

• Green Cleaner Working Group, Center for a New American Dream

Participated in a national working group, hosted by the Center for a New American Dream, to develop and test procurement specifications for environmentally preferable cleaning products. Participants include the CNAD Director of Procurement Strategies, and representatives of the State of Massachusetts, City of Santa Monica, King County, and other governments. This consensus process also includes Green Seal, a private environmental standards organization, and cleaning chemists and manufacturers. At this writing, the State of Massachusetts has issued a contract, based on the specification drafted by this group, and we await reports of the successes and lessons of this contract.

• Recycled Copy Paper Working Group, Center for a New American Dream

Participated in a national working group, hosted by the Center for a New American Dream, to develop and test procurement specifications for recycled paper products. Participants include the CNAD Director of Procurement Strategies, and representatives of the Cities of Santa Monica, California and Phoenix, Arizona, the States of Massachusetts and Minnesota, King County, Green Seal, and others.

• Workshop: How to Do Business with King County

The Environmental Purchasing Program conducted a workshop, on behalf of the **LinkUp** program of the **Department of Natural Resources and Parks**, to help producers of environmentally preferable products learn King County's purchasing procedures. Fourteen local companies, members of **LinkUp**, participated in this event.

Publicity

A key to the success of the King County Environmental Purchasing Program has been the exchange of practical information with other users of these unfamiliar materials. Many of these exchanges have come as a consequence of exposure through national magazines, newspapers, and other publications.

Among the publications which featured the King County Environmental Purchasing Program in 2002/2003:

American City and County, August, 2002

"Green policy saves money, environment"

http://americancityandcounty.com/ar/government green policy saves/

Commission for Environmental Cooperation of North America, March 2003

"Green Procurement: Good Environmental Stories for North Americans" www.cec.org

Government Procurement, October 2002

"Environmentally Preferable Purchasing: Moving Beyond 'Buy Recycled'" www.newdream.org/procure/GovernmentProcurementOctober2002.pdf

Inside Supply Management, April, 2003

"Cleaning Up the Supply Chain" www.ism.ws/Pubs/ISMMag/040306.cfm

Pollution Prevention Northwest, Summer, 2002

"Environmentally Preferable Purchasing"
Pacific Northwest Pollution Prevention Resource Center
www.pprc.org

Sustainable Industries Journal, May, 2003

"King County wins an award from Sustainable Seattle" www.sijournal.com/

AWARDS

2002 Government Award

Second Annual Sustainable Community Outstanding Leadership Award for Government Sustainable Seattle www.sustainableseattle.org/Programs/Awards2002.shtml

2002 WasteWise Award

Local Government "Partner of the Year" Award WasteWise Program, United States Environmental Protection Agency www.epa.gov/wastewise/about/winners.htm

The Environmental Purchasing Program collaborated with the Waste Reduction and Recycling Section of the Solid Waste Division and many other County agencies toward the achievement of this award. For more information about King County's involvement in WasteWise, visit the website at: http://dnr.metrokc.gov/swd/wastewise/ or the press release at http://dnr.metrokc.gov/dnradmin/press/2002/1007epa.htm.

Model Procurement Policy

Program personnel continued to promote the development of recycled and environmentally preferable procurement policies in suburban cities by providing policy guidance, including a model policy, through its website. The model was revised in 1997 to broaden the range of environmentally preferable products, beyond recycled content. Program personnel also provide direct technical assistance to suburban cities for policy implementation, including sharing contracts, specifications, and procurement strategies. According to the Solid Waste Division, twenty-one cities have adopted policies, based on King County's model, since 1992.

Allied King County Programs

Many King County programs offer information and technical assistance to help citizens, businesses and County agencies find ways to help improve our environment. The Environmental Purchasing Program has collaborated with the following programs for the dissemination of information in 2002/03:

Environmental Awareness Program (EAP), Solid Waste Division:

Presented information to Solid Waste Engineering and Landfill Operations about resources available through the Environmental Purchasing program http://dnr.metrokc.gov/swd/eap.htm

Green Building, Solid Waste Division:

Presented information to the "Green Team," and contributed to regular Green Team meetings, workshops and field trips.

http://dnr.metrokc.gov/swd/bizprog/sus build/susbuild.htm

Integrated Pest Management (IPM), Hazardous Waste Management:

Contribute to regular meetings. www.metrokc.gov/hazwaste/ipm

LinkUp, Solid Waste Division:

Presented procurement procedures to LinkUp business partners. http://dnr.metrokc.gov/swd/bizprog/LinkUp/

WasteWise, Solid Waste Division:

Provided assistance to program staff and contributed to annual report http://dnr.metrokc.gov/swd/wastewise/

IV. Environmental Initiatives of County Agencies

The King County Environmental Purchasing Program helps County agencies find ways to use environmentally preferable products and processes in their work. This section contains information about the results of several environmental initiatives by which County agencies are saving time, money, and resources.

The categories of work included in this year's report are:

Green Building
Waste Reduction and Recycling
Air Quality
Energy and Water Conservation

Green Building

Green Building Program, Solid Waste Division, Department of Natural Resources & Parks

King County adopted a Green Building Initiative in October, 2001. This initiative created an interagency Green Team and adopted the LEED (Leadership in Energy and Environmental Design) rating system developed by the US Green Building Council as a standard for all buildings the county constructs, remodels, and renovates. The Green Team aims to help managers of capital projects in King County agencies to achieve the highest LEED rating practical.

The Green Building Program produced its first annual report in 2002. Reported accomplishments include the registration of the County's first two projects with LEED and sponsorship of several "eco-charettes," in which personnel from many agencies and a consultant explored their opportunities to pursue green building approaches.

For more information about King County's Green Building Program, visit the website: http://dnr.metrokc.gov/greenworks/sus_build/green_building.htm

Waste Reduction and Recycling

King County WasteWise Program, Solid Waste Division

The Solid Waste Division maintains King County's membership in the EPA WasteWise program, which measures waste reduction, recycling and buy recycled efforts in the County.-The program won the 2002 "Partner of the Year" award in the local government category for it's 2002 accomplishments. For more information, visit the program website: http://dnr.metrokc.gov/swd/wastewise/

Five Stars for Fleet, Envirostars Program, Hazardous Waste Management Program, Department of Natural Resources and Parks

The King County Department of Transportation's Fleet Administration Division was recently awarded a five-star rating in the Envirostar program of the King County Hazardous Waste Management Program. The program certified Fleet Administration's Renton vehicle maintenance and stores facility as a five-star operation. This five-star rating is the highest level of recognition and is granted only to businesses and agencies that are proactive leaders in preventing waste and spreading an ethic of environmental responsibility. For more information about the Envirostars Program, please visit their website at: www.envirostars.com/

Asphalt Grinder, Operations Section, Road Services Division

The purchase of a new asphalt grinder helps King County carry out repaving projects more quickly and more cost-efficiently. As the grinder travels down a worn-out roadway, 100 carbide-tipped steel teeth turn the old asphalt (about a ton a minute) into small pieces, which are carried up a conveyor belt and spit into a dump truck that travels in front of the grinder. This grinder leaves a smooth subsurface that is repaved immediately. "This method cuts project time dramatically making repaving projects much more cost-efficient," said the Director of the Road Services Division. For more information, visit Roads website at: www.metrokc.gov/kcdot/news/thisweekarch/052603thisweek gunter.htm

Rubber Stall Mat Program, Department of Natural Resources and Parks

The King County Department of Natural Resources and Parks initiated this program through its first annual Small Farm Expo in 2002. Through agreements with local participating retailers, King County offered a total of 1,000 \$10 coupons, in which 460 were redeemed, to encourage livestock owners to purchase recycled-rubber stall mats as a manure management and waste reduction tool. The use of rubber mats can significantly decrease the amount of stall bedding needed, and will reduce surface and ground water contamination.

Air Quality

Ultra Low-Sulfur Diesel Fuel, various agencies, including Department of Transportation and Department of Natural Resources and Parks

King County Metro Transit began testing ULSD and particulate filters in buses in 2001 to improve air quality and began regular use in 2002, in 369 coaches. These tests have shown that the combination can provide a 90% reduction in particulate matter, carbon dioxide and hydrocarbons. Ultra-low sulfur diesel has the same energy and performance specifications as standard diesel, so it does not affect engine performance or warranties. All future buses will be purchased with the new filter technology.

The King County Solid Waste Division announced its decision to purchase ULSD for its entire diesel fleet of 150 trucks, many of which are used to haul garbage from County transfer stations to the landfill at Cedar Hills. Details of the Division's conversion to ULSD can be seen at: http://dnr.metrokc.gov/dnradmin/weekly/2002/wk46-low-sulfr-diesel.htm.

King County Fleet Administration has decided to also pursue the ULSD program in preparation for 2006, when the EPA will require the technology to be on new equipment and for consistency with other King County departments. Even though the ULSD is aimed at highway vehicles, Fleet has expanded the program to off-highway diesel equipment for additional emissions reductions.

Hybrid Buses, Metro Transit, Department of Transportation

King County Metro Transit has become the first in-service demonstration site in the nation for an articulated hybrid diesel-electric bus. Hybrid buses offer benefits over conventional diesel buses, including smoother shifting, 30% fuel efficiency improvements, and cleaner emissions than existing fleets.

In October, 2002 Metro began testing a 60-foot hybrid bus in a variety of driving situations, including the downtown transit tunnel. Over several months, a dozen transit operators drove the hybrid bus 20 hours a day, seven days a week in simulated service. This service was conducting with containers of water, whose weight was equal to that of a full, standing load of passengers (11,000 lbs.), and the bus accumulated more than a year's worth of mileage (37,600 miles). The remaining four hours each day were used for fueling, repairs and maintenance. More information can be on website scheduled seen www.metrokc.gov/kcdot/whatshap/hybrid/updates.stm.

Efficient Marine Engines, Marine Unit, King County Sheriff's Office

In 2002, the Marine Unit of the King County Sheriff's Office purchased two four-stroke outboard motors for their Lake Washington patrol boat. According to the Deputy of Special Operations "these engines are much more efficient than the old two-stroke engines and result in approximately 25% savings in fuel, and they don't burn oil like the old outboards thus eliminating air and water pollution. They are also very quiet which saves on noise pollution for the operator and the citizens". For more information, visit the website at: www.metrokc.gov/procure/green/bul80.htm.

Energy and Water Conservation

Fuel Cell Technologies, Wastewater Treatment Division

Construction of the proposed 1 megawatt fuel cell power plant demonstration project began in spring 2003 at King County's South Treatment Plant in Renton, Washington. The power plant will be evaluated for two years beginning in fall 2003, and will supply about one-quarter of the treatment plants power needs. EPA grant money is helping fund this project. More information about the fuel cell project is available on the website at: http://dnr.metrokc.gov/wtd/fuelcell/details.htm.

New Installations, King County Parks

Low-flush toilets in restrooms, computer controlled lighting at athletic fields and self-compacting trashcans are all part of an effort to cut costs and preserve natural resources at King County Parks. Eventually all King County pools will have low-flow toilets along with waterless urinals and timed showers. For more information about the new installations in King County Parks, visit the website at:

http://dnr.metrokc.gov/dnradmin/press/2003/0418costsavings.htm.

For more information about the King County Environmental Purchasing Program, please visit the program website at www.metrokc.gov/procure/green or contact:

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King County Procurement and Contract Services Section
Finance and Business Operations Division
Department of Executive Services
821 Second Avenue, Suite 10
MS: EXC-ES-0862
Seattle, Washington 98104
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(206)684-1147 Fax



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Text: 60# Text, 30% post-consumer recycled content Cover: Synergy, 80# Cover, 30% post-consumer recycled content



Environmental Purchasing Program www.metrokc.gov/procure/green